

The Office Action objects to the claims on the ground that originally numbered claims 25-34 are misnumbered, there being no original claim 24. The Office Action renumbered claims 25-34 as claims 24-33. This renumbering is adopted by this Amendment and renumbered claims 25-32 have been amended to conform their dependencies to the renumbering.

Claims 27, 28 and 32 have also been amended to correct an antecedent issue by changing "audio/visual" to ---audio/video---.

The Office Action rejects claims 1, 2, 4, 5, 7 and 10 under 35 U.S.C. 102(e) as anticipated by U.S. Patent No. 6,272,457 to Ford et al., hereafter Ford. Ford does not teach or disclose the examining step, the automatically generating step or the analyzing step recited in claim 1.

The Office Action cites the passage at column 2, lines 34-36, as support for the examining step. However, this passage merely refers to editing tools that a field user can use to review and correct speech entries. There is no mention of examining the information stream to recognize a presence of events that occur in the information stream as recited in claim 1.

The Office Action cites the passage at column 2, lines 31-47, as support for the automatically generating step. However, this passage merely refers to building a data record of corrected location data and recognized text data synchronized to a location or a track, the data record being stored in a geographic information system (GIS) database and correlated to linear networks and point observations. There is no mention of the step of automatically generating database queries from the recognized events of the examining step as recited in claim 1.

The Office Action cites the passage at column 4, lines 47-49, as support for the analyzing step. However, this passage merely refers to analysis/processing of asset information developed during collection. There is no mention of analyzing database

query results so as to rank and select database query results to be inserted into the information stream as collateral information as recited in claim 1.

With respect to claim 2, the Office Action cites the passage at column 6, beginning at line 61 and ending at column 7, line 2. This passage refers to a correlation of the asset information to reference data. There is no mention of an analyzing step comprising a step of ranking the database query results based on a plurality of criteria as recited in claim 2.

With respect to claim 4, the Office Action cites the passages at column 5, lines 39-45 and at column 8, lines 7-9. Neither of these passages mentions a topic taxonomy used in automatic text classification as recited in claim 4.

With respect to claim 5, the Office Action cites the passage at column 8, lines 47-52. This passage does not mention a step of automatically extracting text from the information stream as recited in claim 5.

With respect to claim 7, the Office Action cites the passage at column 5, lines 8 and 9. This passage does not mention a step of automatically extracting text from the information stream that further includes a step of operating a voice recognition system, as recited in claim 7.

With respect to claim 10, the Office Action cites the passage at column 5, lines 3-7. This passage refers to the use of photos but does not mention a step of also generating text that is descriptive of a number of human faces present in an image conveyed by the information stream as recited in claim 10.

For the reason set forth above, it is submitted that the rejection of claims under 35 U.S.C. 102(e) as anticipated by Ford is erroneous and should be withdrawn.

The Office Action rejects claims 3, 6, 8, 9 and 11 under 35 U.S.C 103(a) as unpatentable over Ford in view of an article entitled “Topic Detection and Tracking Pilot Study Final Report”, James Allan et al., Proceedings of the DARPA Broadcast News Transcription and Understanding Workshop, pages 194-218, 1998, hereafter Allan.

Ford does not teach the steps of base claim 1 of claims 3, 6, 8, 9 and 11 or any intervening claims as noted above in the discussion concerning the rejection of base claim 1 and the intervening claims under 35 U. S. C. 102(e). Allan was cited as teaching the features recited in claims 3, 6, 8, 9 and 11, but not as teaching the steps of base claim 1 and the intervening claims. Accordingly, neither Ford nor Allan teaches the subject matter of base claim 1 or of the intervening claims. Therefore, the conclusion of obviousness is erroneous.

The conclusion of obviousness is also erroneous because Allan does not teach the features recited by claims 3, 6, 8, 9 and 11.

With respect to claim 3, Allan’s HMM model process does not teach searching a collateral information source or the use of a topic taxonomy and text categorization or the use of the topic taxonomy to compare the similarity of collateral information queries and their search results and to rerank and select collateral information search results.

With respect to claim 6, Allan does not teach the step of operating on the sentences to identify topics that correspond to predetermined topic taxonomies and wherein the step of automatically generating database queries operates on the identified topics.

With respect to claim 8, Allan does not teach the step of extracting closed caption text.

With respect to claim 9, Allan does not teach the step of operating a character recognition system.

With respect to claim 11, Allan describes the “Dragon approach of using an HMM to solve the very specific problem of segmenting the data stream into individual news story topics”. This does not address the problem of automatically generating collateral information queries and reranking and selecting collateral information search results.

For the reasons set forth above, it is submitted that the rejection of claims 3, 6, 8, 9 and 11 under 35 U.S.C 103(a) is erroneous and should be withdrawn.

The Office Action rejects claims 12 and 15-17 under 35 U.S.C 103(a) as unpatentable over Ford in view of U.S Patent No. 5,970,460 to Bunce et al., hereafter Bunce.

Ford does not teach the step of analyzing the text to identify information elements as recited in claim 12. The Office Action cites the passage at column 2, lines 29-41, as showing this step. However, this passage merely refers to editing tools that a field user can use to review and correct speech entries. There is no mention of examining the text to identify information elements as recited in claim 12. Bunce does not teach this step either. Since neither Ford nor Bunce teach the analyzing step, the conclusion of obviousness is erroneous.

The Office Action concedes that Ford does not teach the steps of automatically generating, extracting and multiplexing as recited in claim 12, but alleges that Bunce does teach these steps. This allegation is erroneous with respect to the automatically generating, extracting and multiplexing steps.

In support of the automatically generating step, the Office Action refers to the passage at column 6, lines 48-52 of Bunce. However, this passage merely refers to accessing the database that contains the text that is being edited to match edited text with original text. The passage makes no mention of automatically generating queries from

the information elements of the analyzing step to search the database as recited in claim 12.

In support of the extracting step, the Office Action refers to the passage at column 6, lines 61-65 of Bunce. However, this passage merely refers to user selection of a synthesized entry, which is not changed or extracted in any way, but remains unchanged by the user selection. The passage makes no mention of extracting data from the database search results that is relevant to the information stream as recited in claim 12.

In support of the multiplexing step, the Office Action refers to the passage at column 7, lines 52-60, of Bunce. However, this passage merely refers to presenting the user with options when the user selects a word in text by cursor operation. The passage makes no mention of multiplexing the data from the database search results into the information stream for presentation at a destination of the information stream as recited in claim 12.

Bunce merely describes a system for editing and correcting transcripts generated by an automatic speech recognition system. Bunce's only relevance to Ford or to the invention recited in claim 12 is the step of converting and editing the information stream to text. The Office Action's reading of the automatically generating and extracting steps is strained and unreasonable, as Bunce relates solely to speech recognition and editing thereof and not to augmenting the converted text with relevant collateral information as claimed in claim 12.

With respect to claims 15-17, the cited passages do not mention generating the queries based on information elements that correspond to a list of information elements identifying topics in the text being analyzed, where the topics correspond to predetermined topic taxonomies. The passages make no mention of topics or topic taxonomies.

The Office Action suggestion to use the relied upon teaching of Bunce in combination with Ford is improperly based on the hindsight of Applicants' disclosure. Such hindsight reconstruction of the art cannot be the basis of a rejection under 35 U.S.C. 103. The prior art itself must suggest that modification or provide the reason or motivation for making such modification. In re Laskowski, 871 F.2d 115, 117, 10 USPQ 2d 1397, 1398-1399 (CAFC, 1989). "The invention must be viewed not after the blueprint has been drawn by the inventor, but as it would have been perceived in the state of the art that existed at the time the invention was made." Sensonics Inc. v. Aerosonic Corp. 38 USPQ 2d 1551, 1554 (CAFC, 1996), citing Interconnect Planning Corp. v. Feil, 774 F. 2d 1132, 1138, 227 USPQ 543, 547 (CAFC, 1985).

For the reasons set forth above, it is submitted that the rejection of claims 12 and 15-17 under 35 U.S.C. 103(a) is erroneous and should be withdrawn.

The Office Action rejects claims 13 and 14 under 35 U.S.C 103(a) as unpatentable over Ford in view of Allan and further in view of Bunce.

This rejection is erroneous for the same reasons set forth above in the discussion concerning the rejection of base claim 12 under 35 U.S.C. 103(a).

The Office Action concedes that neither Ford nor Bunce teaches the step of ranking as recited in claims 13 and 14, but alleges that Allan does. Allan describes a technique for clustering news stories using Group Average based Clustering (GAC). The clusters, in turn, are used to track and link together multiple stories (and events) about the same news topic. This teaches nothing about how to rank and select relevant items of information from a collateral information search result using a plurality of criteria (e.g., search relevance score, number of overlapping named entities, categorization taxonomy path similarity, etc.). Rather, Allan merely shows how related news stories might be grouped together.

For the reasons set forth above, it is submitted that the rejection of claims 13 and 14 under 35 U.S.C. 103(a) is erroneous and should be withdrawn.

The Office Action rejects claims 18-23 under 35 U.S.C 103(a) as unpatentable over Bunce in view of U.S Patent No. 5,786,814 to Moran et al., hereafter Moran.

This rejection is erroneous because the allegations in the Office Action that Bunce discloses a subsystem for examining and a subsystem for automatically generating as recited in claim 18 are erroneous.

In support of the subsystem for examining, the Office Action cites the passage beginning at column 1, line 63 and ending at column 2, line 3, of Bunce. This passage refers to a speech event database (SEDB) in which is stored converted audio text and that is maintained in association with an editing program. When a user of the editing program initiates a change in the editing point of a document, a preselected region of text around the new editing point is extracted and cached to generate a context list. The passage does not mention any subsystem for examining an information stream to recognize a presence of events that occur in the information stream as recited in claim 18.

In support of the subsystem for automatically generating, the Office Action cites the passage at column 2, lines 3-5, of Bunce. This passage refers to searching the SEDB for text that matches the context list. The passage does not mention any subsystem, having an input coupled to an output of the examining subsystem, for automatically generating database queries from the recognized events as recited in claim 18.

Accordingly, Bunce does not disclose or teach the subsystems for examining and automatically generating as recited in claim 18. Moran does not teach these subsystems either. Therefore, the conclusion of obviousness is erroneous.

The Office Action concedes that Bunce does not teach the subsystem for analyzing as recited in claim 18, but alleges that Moran does.

In support of the subsystem for analyzing, the Office Action cites the passage at column 3, lines 12-40 of Moran. This passage generally describes a user interface for controlling playback of temporal data representing a collaborative activity such as a meeting. The passage makes no mention of a subsystem, having an input coupled to an output of the database, for analyzing database query results so as to rank and select database query results to be inserted into the information stream as collateral information as recited in claim 18.

Accordingly, since Moran fails to teach the analyzing subsystem of claim 18, the conclusion of obviousness is erroneous.

With respect to claim 19, the cited passages of Bunce have nothing to do ranking criteria, a taxonomy path score, queries base on topics as recited in claim 19.

With respect to claim 20, the cited passages of Bunce do not teach that the examining subsystem comprises an extracting unit, a segmenting unit and a topic identifying unit as recited in claim 20.

With respect to claim 22, the cited passage of Moran merely mentions events of a video stream that include a person, but do not mention that an examining subsystem comprises a unit for generating text that is descriptive of a number of human faces that are present in an image conveyed by the information stream as recited in claim 22.

With respect to claim 23, the passage at column 16, lines 7-9, of Moran merely states that temporal analysis is particular to the information captured by the time stream and the desirable events to be captured, but does not mention a unit for operating on the sentences to identify the names of entities as claimed in claim 23. The passage at column 16, lines 33-42, of Moran refers to an index of the events of an object, but does not mention that a query generation subsystem assembles a query object for searching a database to identify a first set of documents that contain the named entities as claimed in

claim 23. The passage at column 16, lines 38 and 39, of Moran does not even mention a second set of documents as claimed in claim 23. The passage at column 16, lines 26-45, of Moran not only fails to mention the first and second documents, but also does not mention that an analyzing subsystem scores the returned first and second sets of documents and ranks the documents based on their scores as claimed in claim 23.

For the reasons set forth above, it is submitted that the rejection of claims 18-23 under 35 U.S.C. 103(a) is erroneous and should be withdrawn.

The Office Action rejects claims 24-26 and 31-33 under 35 U.S.C 103(a) as unpatentable over Bunce in view of Ford.

With respect to claim 24, the Office Action concedes that Bunce does not teach any of the steps of claim 24, but that Ford teaches all of the steps of claim 24 and, therefore, the combination Bunce and Ford renders claims 24 obvious.

This rejection is untenable.

Ford does not teach the examining step of claim 24. The Office Action cites the passage at column 2, lines 34-36, of Ford as support for the examining step. However, this passage merely refers to editing tools that a field user can use to review and correct speech entries. There is no mention of examining the information stream to recognize a presence of events that occur in the information stream as recited in claim 24.

The Office Action cites the passage at column 2, lines 31-47, of Ford as support for the generating step of claim 24. However, this passage merely refers to building a data record of corrected location data and recognized text data synchronized to a location or a track, the data record being stored in a geographic information system (GIS) database and correlated to linear networks and point observations. There is no mention of the step of generating database queries from the recognized events of the examining step as recited in claim 24.

The Office Action cites the passage at column 4, lines 47-49, of Ford as support for the analyzing step of claim 24. However, this passage merely refers to analysis/processing of asset information developed during collection. There is no mention of analyzing database query results so as to rank and select database query results to presented as the collateral information as recited in claim 24.

For the reasons set forth above, Ford does not teach the examining, generating and analyzing steps or instructions of claim 24. Therefore, the conclusion of obviousness is erroneous.

With respect to claim 25, since Ford does not does not teach either an audio/video information stream or the steps of examining, generating and analyzing as discussed above, Ford cannot teach inserting the output of such steps, i.e., the collateral information, into the audio/video information stream.

With respect to claims 26, 31 and 32, the Office Action contradicts the basic concession of the rejection, namely, that Bunce does not teach the steps recited in claims 24.

With respect to claim 26, the cited passage of Bunce merely deals with speech recognition and makes no mention that the recognized events comprise speech topics as claimed in claim 26.

With respect to claim 31, the cited passages of Bunce have nothing to do with generating database queries based on information corresponding to identified topics extracted from the audio/video stream, where the topics correspond to predetermined taxonomies as recited in claim 31.

With respect to claim 32, the passages at column 5, lines 44-67, and at column 6, lines 11-18 and 48-52, of Bunce have nothing to do with identifying topics in the

sentences that correspond to predetermined topic taxonomies or with the generating step operating on the identified topics as claimed in claim 32.

With respect to claim 33, The Office Action alleges that Bunce teaches the examining instruction, citing the passage at column 3, lines 15-23. This passage merely describes a threshold for distinguishing the spoken words from background noise and has nothing to do with examining the information stream to recognize a presence of events therein as recited in claim 33.

For the reasons set forth above, it is submitted that the rejection of claims 24-26 and 31-33 under 35 U.S.C. 103(a) is erroneous and should be withdrawn.

The Office Action rejects claim 27 under 35 U.S.C 103(a) as unpatentable over Bunce in view of Ford and further in view of Allan.

This rejection is erroneous for the reasons set forth in the discussion concerning the rejection of base claim 24. Thus, it is submitted that the rejection of claim 27 is erroneous and should be withdrawn.

The Office Action rejects claims 28-30 under 35 U.S.C 103(a) as unpatentable over Bunce in view of Ford and further in view of Moran.

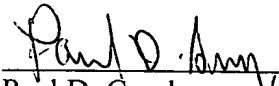
This rejection is erroneous for the reasons set forth in the discussion concerning the rejection of base claim 24. Thus, it is submitted that the rejection of claims 28-30 is erroneous and should be withdrawn.

Attached hereto is a marked-up version of the changes made to the specification and claims by the present amendment. The attachment is captioned "Version With Markings To Show Changes Made."

It is respectfully requested for the reasons set forth above that the rejections under 35 U.S.C. 102(e) and 35 U.S.C. 103(a) be withdrawn, that claims 1-33 be allowed and that this application be passed to issue.

Respectfully Submitted,

Date: 2.24.03



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Application, Serial No. 09/698,894

IN THE CLAIMS

Please amend the claims as follows:

25. (Amended) A method as in claim [25] 24, and further comprising a step of inserting the collateral information into the audio/video stream in real time or substantially real time.
26. (Amended) A method as in claim [25] 24, wherein the step of examining includes a step of generating a speech transcript from at least the audio portion of the audio/visual stream, and wherein recognized events comprise speech topics.
27. (Amended) A method as in claim [25] 24, wherein the [audio/visual] audio/video stream originates as a television broadcast signal.
28. (Amended) A method as in claim [25] 24, wherein the [audio/visual] audio/video stream originates at a meeting, and further comprising a step of presenting the collateral information to meeting participants in real time or substantially real time.
29. (Amended) A method as in claim [29] 28, wherein the step of presenting comprises a step of inserting the collateral information into the audio/video stream, and displaying the audio/video stream to the meeting participants.
30. (Amended) A method as in claim [29] 28, and further comprising a step of archiving at least the collateral information.

31. (Amended) A method as in claim [25] 24, wherein the database queries are automatically generated based on information corresponding to identified topics extracted from the audio/video stream, where the topics correspond to predetermined topic taxonomies.

32. (Amended) A method as in claim [25] 24, wherein the step of examining includes steps of generating a speech transcript comprised of words from at least the audio portion of the [audio/visual] audio/video stream; segmenting the words into sentences; and operating on the sentences to identify topics that correspond to predetermined topic taxonomies, wherein the step of generating database queries operates on identified topics.